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CLAIMS:

1. A watercraft with an engine and a clutch having a clutch casing and an output for transmitting drive from the engine to a transmission of the watercraft, wherein the casing is fitted to the engine and the clutch is operable for controlled slippage to allow torque applied to the output to be varied.
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2. A watercraft as claimed in claim 1, wherein an input of the clutch is coupled to a flywheel of the engine.
3. A watercraft as claimed in claim 2, wherein a damper is provided between the flywheel and input.
- 10 4. A watercraft as claimed in claim 2 or 3, wherein the casing is dimensioned to accommodate the flywheel.
5. A clutch including an input shaft, an output and clutch means operable for controlled slippage to allow torque applied to the output to be varied, wherein the clutch includes a clutch casing for attachment to an engine of a watercraft.
- 15 6. A clutch as claimed in claim 5, wherein the input shaft is arranged to couple directly to an engine output when the clutch casing is attached to the engine.
7. A clutch as claimed in claim 5, wherein the clutch further includes a damper arranged to couple between the input shaft and the engine output.
8. A clutch as claimed in claim 6 or 7, wherein the casing is dimensioned to accommodate the engine output when the clutch is attached to the engine.
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9. A decoupling clutch system for use in a marine craft, the system including a decoupling clutch having a single clutch area and being separate from a gearbox or the like, the decoupling clutch system including an input shaft for operative connection to a drive shaft of the marine craft, and being arranged to drive, via the decoupling clutch, an output shaft which, in use, is operatively connected to a propeller, jet drive or the like of the marine craft, the decoupling clutch system further including a piston or the like for controlling engagement of the clutch, ^{Amended Sheet} control system, means for monitoring
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the input shaft speed and transmitting the input shaft speed to the control system, means for monitoring the output shaft speed and transmitting the output shaft speed to the control system, the control system being arranged to control slippage of the clutch by monitoring both the input shaft speed and the output shaft speeds and adjusting the
5 engaging forces on the clutch to adjust clutch slippage accordingly.

10. A decoupling clutch system as claimed in claim 9 wherein the engaging force on the clutch provided by the piston is controlled by controlling the pressure in the piston using direct acting high flow electro hydraulic solenoids.

11. A decoupling clutch system as claimed in claim 9 or 10 including a biasing means such
10 as a spring or the like, biased to disengage the clutch.

12. A decoupling clutch system as claimed in claim 9 or 10, including a biasing means such as a spring or the like, biased to engage the clutch.

13. A decoupling clutch system as claimed in any one of claims 9 to 12 wherein friction plates are splined to the input shaft and drive is provided to the output shaft through
15 clutch plates which are splined to a clutch drum which is splined to the output shaft.

14. A decoupling clutch system as claimed in any one of claims 9 to 12 wherein friction plates are splined to the output shaft and drive is provided from the input shaft through clutch plates which are splined to a clutch drum which is splined to the input shaft.

15. A watercraft including a drive unit including an engine and a transmission and an
20 output shaft to a propeller, jet drive, or the like characterised by a decoupling clutch system including a clutch being separate from a gearbox or the like and having an input shaft operatively connected to a drive shaft of the marine craft, and being arranged to drive, via the decoupling clutch, an output shaft which is operatively connected to a propeller, jet drive or the like of the marine craft, the decoupling clutch system further including a piston or the like for controlling engagement of the clutch, a control system, means for monitoring the input shaft speed and transmitting the input shaft speed to the control system, means for monitoring the output shaft speed and transmitting the output shaft speed to the control system, the control system being
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arranged to control slippage of the clutch by monitoring both the input shaft speed and the output shaft speeds and adjusting the engaging forces on the clutch to adjust clutch slippage accordingly.

16. A decoupling clutch system as claimed in claim 15 wherein the engaging force on the
5 clutch provided by the piston is controlled by controlling the pressure in the piston using direct acting high flow electro hydraulic solenoids.
17. A decoupling clutch system as claimed in claim 15 or 16 including a biasing means such as a spring or the like, biased to disengage the clutch.
18. A clutch as claimed in any one of claims 1 to 17, having the ability to control high
10 energy torque transfers.